

DOCUMENT RESUME

ED 434 179

UD 033 110

AUTHOR Hong, Eunsook; Lee, Kit-hung
TITLE Chinese Parents' Awareness of Their Children's Homework Style and Homework Behavior and Its Effects on Achievement.
PUB DATE 1999-04-00
NOTE 23p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 19-23, 1999).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Behavior Patterns; *Cognitive Style; Cultural Differences; *Elementary School Students; Foreign Countries; *Homework; Intermediate Grades; *Junior High School Students; Junior High Schools; Parent Child Relationship; *Parents; *Student Attitudes
IDENTIFIERS Hong Kong

ABSTRACT

The degree of parental awareness of their children's homework style and homework behavior and its effects on academic and homework achievement and homework attitude were investigated in 329 Chinese fifth graders (172 boys and 157 girls) and 244 seventh graders (130 boys and 114 girls) and their parents in Hong Kong. Parental awareness of their child's homework style reflected the influences of culture and the age of the child, as indicated in the degree of parent-child agreement on children's preferred homework style in the two grades. In general, a higher degree of parental awareness of the child's homework style preferences was associated with a child having higher achievement and more positive attitudes toward homework. Without parental knowledge of individual differences in learning styles, potentially positive parental influence could be compromised. Cultural differences in the level of support within the home for homework activities and the need for cooperation between teachers and parents in efforts to match home environment with children's strong learning style are discussed. (Contains 3 tables and 52 references.) (Author/SLD)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

Running head: PARENTAL AWARENESS OF CHILDREN'S HOMEWORK BEHAVIOR

Chinese Parents' Awareness of Their Children's
Homework Style and Homework Behavior and Its Effects on Achievement

Eunsook Hong and Kit-hung Lee
University of Nevada, Las Vegas

PERMISSION TO REPRODUCE AND
DISSEMINATE THIS MATERIAL HAS
BEEN GRANTED BY

Eunsook Hong

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)

April 1999

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it
☐ Minor changes have been made to
improve reproduction quality

• Points of view or opinions stated in this
document do not necessarily represent
official OERI position or policy

Paper presented at the annual meeting of the American Educational Research Association,
Montreal, Canada. Correspondence concerning this article should be addressed to Eunsook
Hong, Educational Psychology, University of Nevada, Box 453003, Las Vegas, NV 89154-
3003. Ehong@nevada.edu.

BEST COPY AVAILABLE

Abstract

The degree of parental awareness of their children's homework style and homework behavior and its effects on academic and homework achievement and homework attitude were investigated in 329 Chinese fifth graders (172 boys and 157 girls) and 244 seventh graders (130 boys and 114 girls) and their parents. Parental awareness of their child's homework style reflected the influences of culture and the age of the child, as indicated in the degree of parent-child agreement on children's preferred homework style in the two grades. In general, a higher level of parental awareness of child's homework style preferences was associated with a child having higher achievement and more positive attitude toward homework. Parents are often unaware of their children's preferred way of learning and studying. Without the parental knowledge of individual differences in learning styles, potentially positive parental influence could be compromised. Cultural differences in the level of support within the home for homework activities and the need for cooperation between teachers and parents in efforts to match home environment with children's strong learning style were discussed.

Chinese Parents' Awareness of Their Children's Homework Style and Homework Behavior and Its Effects on Achievement

Although the amount of parental involvement seems to vary between fathers and mothers or between parents with varied levels of formal education, parents everywhere care for their children and want to be involved in all aspects of their children's development including their homework activities (Epstein & Sanders, 1998). Parents structure home life and create a home environment, and this environment influences how children do their homework. In a study on the parents' involvement with their children's schooling, about half of the parents reported their involvement with their children's homework on a daily basis (Smock & McCormick, 1995).

Studies on the effects of parental involvement on academic performance have indicated that parental encouragement and help in homework are important factors in the improvement of student achievement (Bracey, 1996; Gorges & Elliott, 1995; Keith, Reimers, Fehrmann, Pottebaum, & Aubey, 1986; Radencich & Schumm, 1997; Sui-Chu & Willms, 1996; Wang & Wildman, 1995). A homework intervention program for parents on homework problems showed overall improvement in children's homework behavior (homework accuracy and completion rates) during treatment evaluation and three-month follow-up assessment (Loitz & Kratochwill, 1995). Keith and his associates (1993) also reported increased homework completion by students with more parental involvement, indicating that parental involvement is indeed an important influence on student achievement.

Children also believe they do better in school when their parents are involved with homework (Balli, 1998). Nonetheless, children expressed mixed perceptions about how much they enjoyed working with their parents, especially on the extent to which parents facilitated or confused students' understanding of homework concepts, and about the positive or negative affect associated with parent-child interactions.

Educators likewise consider homework as one of the important factors contributing to academic achievement. However, articles on homework share varying views ranging from strong criticism of the use of homework to claims that proper use of homework can yield an increase in

the level of academic achievement (e.g., Cooper, 1989; Gill & Schlossman, 1996; Walberg, 1984, 1985). In her article, "Homework is a complicated thing," Corno (1996) stressed that homework is not a panacea to problems in schools, that it does not foster discipline and personal responsibility, and that parents do not always want their children to receive homework, particularly in the early grades.

Evidence on the effects of homework on achievement is equivocal as well. While the use of homework had a significant, positive effect on academic achievement at the high school and college levels (e.g., Cooper, Lindsay, Nye, & Greathouse, 1998; Fehrmann, Keith, & Reimers, 1987; Keith, 1998; Keith & Benson, 1992; Keith & Cool, 1992; Keith et al., 1986), at the elementary and middle school levels, the findings were mixed (e.g., Chen & Stevenson, 1989; Cool & Keith, 1991; Cooper et al., 1998; Paschal, Weinstein, & Walberg, 1984).

The studies of homework effects on school achievement and attitude have focused on the characteristics of the homework itself (e.g., type, quality, amount, and feedback approach). However, the cognitive and personality characteristics of the person doing the homework (e.g., individual preferences of time, place, conditions) and other influences on the process of learning outside of school (e.g., the impact of culture, subculture, parents, siblings) received relatively little attention. In the current study, we examined parental awareness of their children's preferred way of doing homework (i.e., homework style) in Chinese culture. In-school learning style differences among individuals from diverse cultural backgrounds have been evidenced in numerous studies (e.g., Claxton, 1990; Ewing & Yong, 1992; Griggs & Dunn, 1996; Hong & Suh, 1995; Milgram, Dunn, & Price, 1993; Smith, 1992). Different patterns of homework style have also been found in different cultures. For example, although there were similarities in children's homework style in Korea and the U.S., there were a substantial number of components of homework style that clearly distinguished children from the two cultures (Hong & Milgram, *in press*; Hong, Milgram, & Perkins, 1995).

Although researchers have suggested the importance of parental involvement in the homework process, the level of parental awareness of their children's homework behavior and preferred homework style has rarely been investigated. Hoover-Dempsey, Bassler, and Burow

(1995), in their research on homework as the most common point of intersection among parent, child, and school activities, revealed information about parents' thinking, strategies, and actions related to homework. Parents often felt ill-prepared about homework tasks by limitations in knowledge and competing demands for their time and energy. One strategy that could help parents prepare to assist children in doing their homework is first to be cognizant of their own children's preferred homework style and homework behavior. Once parents are aware of them, they can help children by accommodating home environment to match it with their preferred homework style.

Hong et al. (1995) compared the level of parental awareness between Korean and U.S. parents. Korean parents reported higher levels of awareness in their children's homework style preferences that are highly important in determining the efficacy of homework behavior. For example, Korean parents understood the child's need for appropriate lighting, an aspect of the learning environment that parents can easily adjust for their children. The positive effects of parent understanding of children's preferred conditions for learning at home was indicated by higher scores in homework attitude of children whose parents shared an understanding with their children, compared to children whose parents did not.

Ethnic group differences in parental involvement, expectations, and values in education have been investigated. Asian and Asian-American parents tend to place a high value on education overall, hold high standards, and have high educational expectations for their children (Chao, 1996; Chen & Stevenson, 1995; Ellinger & Beckham, 1997; Mau, 1997; Okagaki & Frensch, 1998; Peng & Wright, 1994). Asian-American parents have also shown to believe in their direct and significant role in their child's academic success (e.g., Chao, 1996). Ebbeck (1996) reported that Chinese parents in Hong Kong want their children to be given large amounts of homework (about 40% of parents wanted their children's homework to be three hours or more or as much as possible each day) to the extent that the findings reinforce the view held by many school principals in Hong Kong that they are under pressure from parents to set a large amount of homework each day. Chinese parents in England were also concerned about their children not getting enough homework and wanted more homework for their children (Ghuman & Wong, 1989).

Furthermore, over 40 percent of parents in Beijing, China, actually gave their children extra homework (Xie, Seefeldt, & Tam, 1996), and this phenomenon has also been seen in Chinese-American families (Siu, 1994).

The current study examined homework styles and homework behaviors of Chinese students in Hong Kong. Investigation on homework with these children is of interest because of Chinese parents' attitudes toward homework that are quite different from those of parents in western cultures and Chinese students' high academic achievement in the international studies of academic achievement (TIMSS International Study Center, 1998). Specifically, the study explored (1) the degree of parental awareness of their children's homework style and homework behavior and (2) the effects of parental awareness of children's homework style on academic and homework achievement and homework attitude. It was predicted that a wide range of parental awareness levels would reveal in these parents and that students whose parents report high level of awareness of their children's homework style and behavior would show achievement and attitude that are higher than those of their counterparts.

Method

Participants

The participants were 329 Chinese fifth graders (172 boys and 157 girls) and 244 seventh graders (130 boys and 114 girls) and their parents. The students were from a school which housed Kindergarten through high school in Hong Kong, where all of the students are from a Chinese ethnic background. Participants consisted largely of middle to upper middle class students. All fifth- and seventh-grade students in this school who were present on the day the investigation was conducted participated.

Measures

Students' homework style. The Homework Preference Questionnaire (HPQ) (Milgram & Hong, 1996) was employed to measure students' preferred homework style. The HPQ provided a comprehensive assessment of the conditions under which each participant preferred to learn at home (i.e., preferred homework style). It consisted of 80 items that were rated on a five-point scale indicating degree of agreement. The questionnaire yielded 20

scores that corresponded to the 20 postulated elements of homework style. Each of the 20 scores consisted of 4 items. For 14 scores, high scores indicated high preference (motivation, persistence, responsibility, structure, set-order, authority figures, auditory, visual, tactile, kinesthetic, intake, mobility, parent-motivated, teacher-motivated). Six scores of homework style were scored on a bipolar continuum from low to high, with high scores indicating preference for the second pole cited (silence/sound, dim/bright light, cool/warm temperature, informal/formal design, alone/peers, change place/same place).

Table 1 presents the internal consistency estimates (Cronbach alpha), means, and standard deviations of the HPQ element scores for both fifth and seventh graders. The median internal consistency was .73 and .77 for fifth and seventh grade, respectively.

Parental awareness of children's homework style. The same HPQ used for students were employed to measure parental awareness. The sample item and questionnaire items were the same as those in the student version HPQ; however, the instructions were modified. Parents were asked to respond to each item as they think their child would answer them. The median internal consistency was .68 and .71 for the parent ratings of fifth and seventh graders, respectively. See Table 1 for the internal consistency estimates, means, and standard deviations of parental ratings of their children's homework style.

Perceived homework behavior. Four items that assessed participants' self-perception of their homework achievement and four items for homework attitude were added to the HPQ. The eight items were interspersed in the HPQ to avoid any response set problem. Participants were rated on a five-point scale indicating degree of agreement. Examples of the homework achievement and attitude items are: "If grades were given for homework, I would get a high grade" and "What I learn from doing my homework helps me in school," respectively. The internal consistency estimates of the students' and parents' perceived homework achievement and attitude ranged from .60 to .79 (see Table 1).

Insert Table 1 about here

Teacher-rated homework achievement. The participating classroom teachers rated their students' homework completion and homework quality in mathematics and Chinese language. Due to the varying recording systems they used in rating homework achievement, teachers were instructed to assign scores from 1 to 10, based on their records on students' homework completion and quality scores.

Academic achievement. Scores on the final examinations on Mathematics and Chinese language were the measures of academic achievement in the study. The participating fifth-grade teachers provided the scores of their own class students. For seventh graders, teachers who taught mathematics and Chinese language provided the scores of the participating students. The tests were common to all students in each grade, and the possible range of the examination scores were from 0 to 100.

Procedure

The student HPQ was group-administered to students in their school classrooms with no time limits. The parent HPQ was given to each student to be filled in at home by the parent and to be brought back in three days. The questionnaires were translated into Chinese by the junior author, who is fluent in both English and Chinese and had 24 years of teaching experience in elementary and secondary schools. The initial translation was modified by both authors; the modification consisted of cultural considerations in the use of certain terms in the items. A back-translation was performed by another Chinese/English bilingual who had been a kindergarten and elementary school teacher for 2 years in Hong Kong and 12 years in Canada. The back-translations that were not considered acceptable were modified again until all the items were considered acceptable.

Results

Parental Awareness of Children's Homework Style and Homework Behavior

Parental awareness of their children's homework preferences was investigated by examining the degree of match between children's and parents' ratings on each item of the Homework Preference Questionnaire. To examine the pattern of their agreement, we recoded the five-point scale responses to a three-point scale (agree, uncertain, disagree); that is, both strongly

agree and agree were coded as "agree," and both strongly disagree and disagree were coded as "disagree."

Of the 20 homework style elements tested, the lowest, median, highest number of matched elements between parent-child ratings were 3, 11, and 19, respectively, for the fifth graders; and those for the seventh graders were 1, 10, and 20, respectively. An inspection of parent-child agreement on the individual style element scores indicated that Chinese parents of fifth-grade students reported as particularly sensitive to their child's homework preferences for formal or informal design of furniture (79% matched) and for structured or unstructured homework (74%), and to whether their child is self-motivated (71%) and responsible (74%) in doing homework.

The percent of agreement in the seventh-grade sample for each element was in general lower than that found in the fifth-grade sample. Only the design element showed 73% of agreement between child and parent. Other three elements (structure, motivation, responsibility) were at the 60% level of agreement, which were higher than those of the rest of the style elements in seventh graders. Thus, the style elements that the parents of both graders were sensitive were very similar, but parents' awareness levels seemed to have become decreased as children grew older.

The findings of the style elements with low level of agreement point to an interesting phenomenon. In the fifth-grade sample, the preference to be alone or with peers and to the presence of authority figures when doing homework were 33% and 37% in parent-child agreement, respectively, while in the seventh-grade sample, they were 45% and 52%, respectively. These elements may be more conversation-provoking in older students than in younger ones. Other elements of homework style were similar between fifth and seventh graders except for parent-motivated and teacher-motivated, where higher parent-child agreements were found in the younger sample. Table 2 shows the parent-child agreement scores in percentage for both fifth and seventh graders.

Insert Table 2 about here

In regard to the homework achievement and homework attitude measures, the lowest number of matched ratings of parent-child perceptions were 0 and the highest were 4 (out of 4) in both measures in both grades. Over 40% of child-parent agreement was found in all four homework achievement items, where two of the four items indicated a match of over 60%. The findings indicate that about half of the parents were cognizant of their children's self-perceived homework achievement level. Attitude items were similarly high in the degree of match between child's and parent's perceptions, except for one item (less than 19% and 16% of agreement for fifth and seventh grade, respectively). The finding on this item, "I like doing homework," suggests that it is difficult for parents to determine whether their children liked or disliked doing their homework, compared to other items that measured the attitude concerning the helpfulness of homework in learning (e.g., What I learn from doing my homework helps me in school).

Effects of Parental Awareness of Children's Homework Style on Homework and Academic Achievement

Whether parental understanding of the child's preferred style has an effect on achievement or attitude toward homework was investigated next. Self-perceived homework achievement and attitude, teacher-rated homework completion and homework quality, and final examination scores in mathematics and Chinese language were dependent variables.

Match or mismatch between child and parent element scores were examined. If child's and parent's responses matched on 13 (65%) or more elements of the 20 homework style elements, we categorized them as "match", and as "mismatch" if responses matched on 9 (45%) or less elements. The match scores that fell in between the two points were excluded. The purposes of using such cutoff scores (13 and 9) instead of using one splitting point or using all participants' scores for correlation computations were (a) to obtain a clear distinction between match and mismatch groups by reducing possibilities of including participants with chance match/mismatch, which is likely to happen in the middle level of the match-score range, and (b) to achieve reasonably balanced group sizes in both grades. In the fifth-grade sample, there were 104 match and 105 mismatch, while in the seventh-grade sample, 98 match and 68 mismatch.

Multivariate analyses of variance were performed on the combined dependent measures followed by univariate analyses of variance.

Self-perceived homework achievement and homework attitude. In both grades, statistically significant differences were found between the match and mismatch groups on the combined scores of self-perceived homework achievement and attitude, $F(2, 206) = 17.77, \eta^2 = .15$, for fifth graders, and $F(2, 163) = 19.28, \eta^2 = .19$, for the seventh graders, $ps < .0005$. Univariate analyses of variance indicated that homework achievement and homework attitude each contributed to distinguishing the match-mismatch groups, $ps < .0005$ for both grades. Table 3 presents the means and standard deviations of the perceived homework achievement and homework attitude scores for matched and mismatch groups of fifth- and seventh-grade students. Students in matched group had higher scores on average on both measures. Thus, students whose parents were aware of their preferred homework style reported higher perceived homework achievement and more positive attitudes toward homework than did students whose parents were not.

Teacher-rated homework achievement. A statistically significant difference was indicated between the match and mismatch groups in fifth graders, $F(4, 204) = 3.60, p < .01$, on the combined score for homework achievement, that is, homework completion and homework quality in Mathematics and Chinese. However, the effect size (η^2) was only .07. Univariate analyses on each of the four homework achievement scores indicated that there was a significant difference between the two groups on the homework completion and quality on Chinese language, $F(1, 207) = 11.99$, and $F(1, 207) = 12.37$, respectively, $ps = .001$. Higher mean scores in Chinese language were indicated in the matched group for both homework completion and quality assessed by the classroom teachers (see Table 3). Mathematics homework quality scores distinguished the match and mismatch groups, but only at the .05 level of significance, and math homework completion scores were not significantly different in the two groups (see Table 3).

Similar multivariate results were obtained with the seventh-grade sample, $F(4, 161) = 3.75, p = .01$, on all four measures of teacher-rated homework achievement, with a small effect size, $\eta^2 = .09$. Univariate analyses of the four teacher-rated homework scores indicated that a

statistically significant difference was found between the match and mismatch groups on each of the four scores, with the completion and quality on mathematics were statistically significant at the .001 level, but those on Chinese language only at the .01 level. As expected, the matched group had high mean scores on both homework completion and quality scores (see Table 3).

Again, students whose parents understood their preferred homework style (matched group) in general scored higher in teacher-rated homework achievement than did students whose parents did not. However, it is difficult to speculate why a particular subject matter was found to distinguish the match-mismatch group more significantly than did the other in each grade level: In the fifth grade, it was Chinese language, while in the seventh grade, it was mathematics that significantly distinguished the two groups. Further empirical data are needed to determine the relationship between the parental awareness and homework achievement in various subject matters.

Academic achievement. The match and mismatch groups of fifth graders were significantly different on the combined score of math and Chinese language final examinations, $F(2, 206) = 3.15, p < .05$, but with a very small effect size $\eta^2 = .03$. Univariate analyses indicated that both math and Chinese subject matters distinguished the two groups, but only at the .05 level of significance. Similar multivariate findings were obtained with seventh graders, $F(2, 163) = 7.09, p = .001$, with $\eta^2 = .08$. Univariate analyses indicated that Chinese language subject matter distinguished the two groups at the .0005 level, but mathematics did only at .05. Again in both mathematics and Chinese subject matters, students in the matched group scored higher on average than did those in the mismatched group (see Table 3).

Insert Table 3 about here

Discussion

The findings on the parental awareness of their children's preferred homework style reflect both the cultural influence and children's developmental influence. The same elements with high awareness levels found in Chinese parents of both fifth and seventh graders--they were

most aware of their children's preferred furniture design and homework structure, and motivation and responsibility levels--indicate that the consistent findings across the two grades could be the results of the participants living in the same cultural milieu. As previous findings were compared with the current ones, similarities and differences were indicated in the children's style elements to which parents from different countries were sensitive. For example, responsibility was among the keenly observed elements in Chinese, Korean, and U.S. parents, in addition to the children's self-motivation level of which Chinese and Korean parents were highly perceptive. However, other elements with high awareness levels were specific to each country (Hong et al., 1995).

While the elements of which parents of both graders were highly perceptive were the same in the current study, the degrees of parent-child agreements were not consistent across the two grades, with the parents of seventh graders in general agreeing with their children to a lesser degree. In addition, the levels of parent-child agreement in the parent- and teacher-motivated elements were higher in younger children. This might indicate that adult concerns and supervisions were closer with younger children than with older ones. The exceptions in the elements of alone/peers and presence of authority figures, where higher level of parent-child agreement was found in seventh grade, might indicate that these sociological factors become one of the major topics of conversation as children grow older. These findings should be verified by examining them with other culture-related variables in future studies.

Overall, high level of parental awareness of child's homework style preferences was associated with high academic and homework achievement and positive attitude toward homework. Although some homework intervention studies have shown improvements in student achievement (e.g., Gorges & Elliott, 1995), others have not. Balli, Wedman, and Demo (1997), for example, found that while the intervention designed to increase family involvement was effective in prompting family involvement, the increased level of family involvement was not significantly related to student achievement on the posttest. The current study examined self-reported parental awareness without an intervention, thus how parental awareness translated into actual match of home environment to the child's strong style was not examined. However, the current findings of positive achievement-parent awareness relationship are rather encouraging

and point to the need for increasing efforts in accommodating home learning environment. If the home environment is tailored to meet the individual preferences of learners, it is reasonable to expect an improvement in homework achievement and attitudes, similar to that attained when in-school learning was matched to individual students' learning styles (e.g., Dunn, Griggs, Olson, Beasley, & Gorman, 1995).

Students who had certain preferences in doing their homework might not necessarily do their homework according to those preferences (Hong & Milgram, *in press*). As indicated by the low parent-child agreement scores in the mismatch group, it is apparent that some parents are unaware of their child's preferred way of learning and studying. Without the knowledge of individual differences in learning styles at school and home, potentially positive influence of parental assistance could be compromised. If parents were made aware of the potential benefits that would accrue to their children if allowed to do their homework according to their preferences, they would probably be more willing to adjust the learning conditions to match their child's profile of preferences and to determine whether the child's preferred styles are best to be used.

The internal consistency estimates for a few style elements were low. The findings associated with these elements need to be interpreted with caution, and the study needs to be replicated using various samples. However, the findings in general are resourceful and contribute to our understanding of the parental role in student achievement.

Asian or Asian-American parents, compared to European-American parents, have been reported not only to place a high value on school achievement (e.g., Lin & Fu, 1990) but to provide more support for homework activities (e.g., Constantino, Liming, & Faltis, 1995; Peng & Wright, 1994; Whipple, 1998). High parental involvement with their child's schooling, especially in homework, may be one of the reasons for the high achievement in Asian and Asian-American students (Keith & Benson, 1992). The findings of current study with Chinese students and previous studies on homework and homework style suggest that cooperations between teachers and parents are vital in improving achievement of all students with various backgrounds.

References

- Balli, S. J. (1998). When mom and dad help: Student reflections on parent involvement with homework. Journal of Research and Development in Education, 31, 142-146.
- Balli, S. J., Wedman, J. F., & Demo, D. H. (1997). Family involvement with middle-grades homework: Effects of differential prompting. Journal of Experimental Education, 66, 31-48.
- Bracey, G. W. (1996). SES and involvement. (the impact of socioeconomic status and parental involvement on education. Phi Delta Kappan, 78, 169-170.
- Chao, R. K. (1996). Chinese and European American mothers' beliefs about the role of parenting in children's school success. Journal of Cross Cultural Psychology, 27, 403-423.
- Chen, C., & Stevenson, H. W. (1989). Homework: A cross-cultural examination. Child Development, 60, 551-561.
- Chen, C., & Stevenson, H. W. (1995). Motivation and mathematics achievement: A comparative study of Asian-American, Caucasian-American, and East Asian high school students. Child Development, 66, 1215-1234.
- Claxton, C. S. (1990). Learning styles, minority students, and effective education. Journal of Developmental Education, 14(1), 6-10.
- Constantino, R., Liming, C., & Faltis, C. (1995). Chinese parental involvement: Reaching new levels. Equity & Excellence in Education, 28, 46-50.
- Cool, V. A., & Keith, T. Z. (1991). Testing a model of school learning: Direct and indirect effects on academic achievement. Contemporary Educational Psychology, 16, 28-44.
- Cooper, H. (1989). Homework. White Plains, NY: Longman.
- Cooper, H., Lindsay, J. J., Nye, B., & Greathouse, S. (1998). Relationships among attitudes about homework, amount of homework assigned and completed, and student achievement. Journal of Educational Psychology, 90, 70-83.
- Corno, L. (1996). Homework is a complicated thing. Section 4: Grading the policymakers' solution. Educational Researcher, 25(8), 27-30.
- Dunn, R., Griggs, S. A., Olson, J., Beasley, M., & Gorman, B. S. (1995). A meta-

analytic validation of the Dunn and Dunn model of learning style preferences. Journal of Educational Research, 88, 353-362.

Ebbeck, M. (1996). Parents expectations and child rearing practices in Hong Kong. Early Child Development and Care, 119, 15-25.

Ellinger, T. R., & Beckham, G. M. (1997). South Korea: Placing education on top of the family agenda. Phi Delta Kappan, 78, 624-625.

Epstein, J. L., & Sanders, M. G. (1998). What we learn from international studies of school, family, and community partnerships. Childhood Education, 74, 392-394.

Ewing, N. J., & Yong, F. L. (1992). A comparative study of the learning style preferences among gifted African-American, Mexican-American, and American-born Chinese middle grade students. Roeper Review, 14, 120-123.

Fehrmann, P. G., Keith, T. Z., & Reimers, T. M. (1987). Home influence on school learning: Direct and indirect effects of parental involvement on high school grades. Journal of Educational Research, 80, 330-337.

Ghuman, P., & Wond, R. (1989). Chinese parents and English education. Educational Research, 31, 130-140.

Gill, B., & Schlossman, S. (1996). "A sin against childhood": Progressive education and the crusade to abolish homework, 1897-1941. American Journal of Education, 105, 27-66.

Gorges, T. C., & Elliott, S. N. (1995). Homework: Parent and student involvement and their effects on academic performance. Canadian Journal of School Psychology, 11(1), 18-31.

Griggs, S. A., & Dunn, R. (1996). Learning styles of Asian-American adolescents. Emergency Librarian, 24(1), 8-13.

Hong, E., & Milgram, R. M. (in press). Preferred and actual homework style: A cross-cultural examination. Educational Research.

Hong, E., Milgram, R. M., & Perkins, P. G. (1995). Homework style and homework behavior of Korean and American Children. Journal of Research and Development in Education, 28, 197-207.

Hong, E., & Suh, B. K. (1995). An analysis of change in Korean-American and Korean

students' learning styles. Psychological Reports, 76, 691-699.

Hoover-Dempsey, K. V., Bassler, O. C., & Burow, R. (1995). Parents' reported involvement in students' homework: Strategies and practices. Elementary School Journal, 95, 435-450.

Keith, T. Z. (1998). Homework in and out of school. Paper presented at the meeting of the American Educational Research Association, San Diego, CA.

Keith, T. Z., & Benson, M. J. (1992). Effects of manipulable influences on high school grades across five ethnic groups. Journal of Educational Research, 86, 85-93.

Keith, T. Z., & Cool, V. A. (1992). Testing models of school learning: Effects of quality of instruction, motivation, academic coursework, and homework on academic achievement. School Psychology Quarterly, 7, 207-226.

Keith, T. Z., Keith, P. B., Troutman, G. C., Bickley, P. G., Trivette, P. S., & Singh, K. (1993). Does parental involvement affect eighth-grade student achievement? Structural analysis of national data. School Psychology Review, 22, 474-496.

Keith, T. Z., Reimers, T. M., Fehrmann, P. G., Pottebaum, S. M., & Aubey, L. W. (1986). Parental involvement, homework, and TV time: Direct and indirect effects on high school achievement. Journal of Educational Psychology, 78, 373-380.

Lin, C. C., & Fu, V. R. (1990). A comparison of child-rearing practices among Chinese, immigrant Chinese, and Caucasian-American parents. Child Development, 61, 429-433.

Loitz, P. A., & Kratochwill, T. R. (1995). Parent consultation: Evaluation of a self-help manual for children's homework problems. School Psychology International, 16, 389-396.

Mau, W. (1997). Parental influences on the high school students' academic achievement: A comparison of Asian immigrants, Asian Americans, and White Americans. Psychology in the Schools, 34, 267-277.

Milgram, R. M., Dunn, R., & Price, G. E. (Eds.). (1993). Teaching and counseling gifted and talented adolescents: An international learning styles perspective. Westport, CT: Praeger.

Milgram, R. M., & Hong, E. (1996). Homework Preference Questionnaire. Unpublished document, Tel-Aviv University, School of Education and University of Nevada, Las Vegas,

College of Education.

Okagaki, L., & Frensch, P. A. (1998). Parenting and children's school achievement: A multiethnic perspective. American Educational Research Journal, 35, 23-144.

Paschal, R. A., Weinstein, J., & Walberg, H. J. (1984). The effects of homework on learning: A quantitative synthesis. Journal of Educational Research, 78, 97-104.

Perkins, P. G., & Milgram, R. M. (1996). Parent involvement in homework: A double-edged sword. International Journal of Adolescence and Youth, 6, 195-203.

Peng, S. S., & Wright, D. (1994). Explanation of academic achievement of Asian American students. Journal of Educational Research, 87, 346-352.

Radencich, M. C., & Schumm, J. S. (1997). How to help your child with homework: Every caring parent's guide to encouraging good study habits and ending the homework wars. Minneapolis, MN: Free Spirit Publishing.

Reetz, L. J. (1990/1991). Parental perceptions of homework. Rural Educator, 12(2), 14-19.

Siu, S. (1994). Taking no chances: A profile of a Chinese-American family's support for school success. Equity and Choice, 10(2), 23-32.

Smith, K. J. (1992). Using multimedia with Navajo children: An effort to alleviate problems of cultural learning styles, background of experience, and motivation. Reading and Writing quarterly, 8, 287-294.

Smock, S. M., & McCormick, S. M. (1995). Assessing parents' involvement in their children's schooling. Journal of Urban Affairs, 17, 395-411.

Sui-Chu, E. H., & Willms, J. D. (1996). Effects of parental involvement on eighth-grade achievement. Sociology of Education, 69, 126-141.

TIMSS International Study Center (1998). Performance assessment in IEA's third international mathematics and science study (TIMSS) [On-line]. Available: wwwcsteep.bc.edu/timss.

Walberg, H. J. (1984). Improving the productivity of American schools. Educational Leadership, 41, 19-26.

Walberg, H. J. (1985). Homework: Powerful effect on learning. Educational Leadership, 42, 76-79.

Wang, J., & Wildman, L. (1995). An empirical examination of the effects of family commitment in education on student achievement in seventh grade science. Journal of Research in Science Teaching, 32, 833-837.

Whipple, A. D. (1998). Gifted children: Parental expectations, structure within the home, homework, and television. Paper presented at the Annual Meeting of the American Educational Research Association, San Diego, CA.

Xie, Q., Seefeldt, C., & Tam, H. P. (1996, April). Parenting styles and only children's school achievement in China. Paper presented at the Annual Conference of the American Educational Research Association, New York. (ERIC Document Reproduction Service No. ED 396 819)

Table 1

Internal Consistency Estimates and Mean Homework Style Scores for Fifth- and Seventh-Grade Chinese Students and Their Parents' Awareness Scores

Homework style elements	Fifth grade				Seventh grade			
	Students		Parents		Students		Parents	
	α	M (SD)	α	M (SD)	α	M (SD)	α	M (SD)
Sound	.84	2.36 (1.15)	.79	2.16 (.83)	.87	2.61 (1.05)	.83	2.36 (.89)
Light	.76	3.99 (1.00)	.58	4.18 (.62)	.77	4.00 (.79)	.60	4.03 (.67)
Temperature	.76	2.93 (.97)	.69	2.80 (.66)	.77	2.78 (.78)	.70	2.81 (.65)
Design	.71	4.03 (.87)	.70	4.21 (.66)	.80	3.82 (.87)	.71	3.99 (.75)
Structure	.64	3.94 (.89)	.54	3.97 (.66)	.58	3.72 (.73)	.54	3.92 (.65)
Set order	.70	3.21 (1.01)	.63	3.37 (.71)	.77	3.02 (.84)	.75	3.38 (.74)
Place	.82	3.77 (.99)	.75	3.83 (.70)	.84	3.58 (.85)	.74	3.85 (.65)
Motivation	.72	4.17 (.71)	.75	3.87 (.67)	.80	3.62 (.75)	.81	3.74 (.75)
Persistence	.54	3.81 (.76)	.63	3.85 (.67)	.58	3.61 (.69)	.66	3.76 (.65)
Responsibility	.58	4.05 (.75)	.66	3.94 (.69)	.72	3.53 (.77)	.70	3.77 (.73)
Parent-motivated	.70	3.71 (.83)	.68	3.76 (.66)	.78	3.19 (.79)	.74	3.51 (.72)
Teacher-motivated	.69	3.87 (.82)	.58	3.85 (.65)	.66	3.45 (.75)	.58	3.66 (.65)
Auditory	.63	3.37 (.87)	.64	3.41 (.71)	.64	3.31 (.72)	.58	3.44 (.66)
Visual	.64	2.91 (.92)	.60	3.04 (.70)	.67	3.08 (.76)	.62	3.05 (.70)
Tactile	.76	3.48 (1.02)	.68	3.33 (.72)	.85	3.16 (1.01)	.76	3.40 (.76)
Kinesthetic	.73	3.41 (.87)	.62	3.43 (.58)	.77	3.20 (.74)	.71	3.34 (.63)
Intake	.83	2.77 (1.12)	.78	2.60 (.89)	.85	3.05 (1.01)	.81	2.70 (.90)
Mobility	.75	2.34 (.95)	.68	2.45 (.75)	.76	2.54 (.80)	.70	2.48 (.73)
Alone-peers	.80	3.01 (1.09)	.68	2.36 (.68)	.85	2.89 (.97)	.76	2.41 (.73)
Authority Figures	.87	2.51 (1.11)	.83	2.89 (.86)	.86	2.17 (.85)	.81	2.55 (.79)
Perceived HW ^a								
achievement	.60	3.99 (.63)	.61	3.95 (.57)	.71	3.50 (.65)	.75	3.80 (.68)
attitude	.79	3.71 (.93)	.72	3.91 (.64)	.79	3.40 (.80)	.77	3.82 (.66)

Note. N = 329 in fifth-grade student/parent sample; N = 244 in seventh-grade student/parent sample.

^aHW = Homework.

Table 2

Agreement Between Students' Preferred Homework Style and Parents' Awareness
of Their Children's Style in Percentage for Fifth and Seventh Graders

Homework style		
elements	Fifth grade	Seventh Grade
Sound	.57	.49
Light	.69	.69
Temperature	.40	.50
Design	.79	.73
Structure	.74	.63
Set order	.39	.36
Place	.63	.59
Motivation	.71	.62
Persistence	.67	.65
Responsibility	.74	.61
Parent-motivated	.61	.46
Teacher-motivated	.63	.52
Auditory	.41	.41
Visual	.41	.43
Tactile	.41	.44
Kinesthetic	.50	.51
Intake	.43	.45
Mobility	.50	.48
Alone-peers	.33	.45
Authority Figures	.37	.52

Note. N = 329 fifth-grade child-parent pairs; N = 244 seventh-grader child-parent pairs.

Table 3

Means and Standard Deviations of Students' Perceived Homework Achievement, Teacher-rated Homework Completion and Quality, and Final Examination Scores in Mathematics and Chinese Language for the Matched and Mismatched Groups of Both Fifth and Seventh Graders

Scores	Fifth grade		Seventh grade	
	Matched	Mismatched	Matched	Mismatched
	$n = 104$	$n = 105$	$n = 98$	$n = 68$
	M (SD)	M (SD)	M (SD)	M (SD)
Self-perceived				
HW achievement	4.85 (.53)	4.33 (1.01)	4.59 (.81)	3.55 (1.28)
HW attitude	4.58 (.99)	3.58 (1.59)	4.32 (1.01)	3.49 (1.38)
Teacher-rated				
Mathematics ^a				
HW completion	8.61 (1.49)	8.20 (1.85)	8.65 (1.45)	7.55 (2.06)
HW quality	7.55 (1.95)	6.99 (2.07)	8.29 (1.60)	7.34 (1.94)
Teacher-rated				
Chinese language ^b				
HW completion	8.71 (1.47)	7.97 (1.63)	8.91 (1.95)	7.96 (2.37)
HW quality	8.03 (1.72)	7.17 (1.79)	7.93 (1.67)	7.10 (1.76)
Academic achievement				
(final examination) ^c				
Mathematics	72.53 (15.00)	67.11 (18.63)	75.63 (12.73)	71.81 (13.87)
Chinese language	78.44 (6.41)	76.37 (7.18)	68.76 (9.24)	63.34 (9.02)

Note. $N = 329$ fifth-grade student-parent pairs; $N = 244$ seventh-grader student-parent pairs.

^aSignificantly different between the matched and mismatched group in seventh graders; but group difference only in homework quality in fifth graders at .05 level.

^bSignificant group differences found in both grades; however, group differences in Chinese language were at .01 levels.

^cSignificant group differences found in both grades; however, only the seventh-grade Chinese language scores distinguished the two groups at .0005, while others were at .05 level.